REMARKS

This application has been reviewed in light of the Office Action dated June 1, 2005. Claims 1, 31-33, 35 and 37 are pending in this application, of which Claims 1, 35 and 37 are in independent form, and have been amended to recite still more clearly what Applicant regards as his invention. Favorable reconsideration of the present claims is respectfully requested.

The Examiner has rejected Claims 1, 31-33, 35 and 37 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,611,288 (Fossum et al.) in view of U.S. Patent No. 5,185,883 (Ianni et al.). Applicant respectfully traverses this rejection, for the following reasons.

Claim 1 is directed to an image processing apparatus that comprises extraction means for extracting a pixel signal of an image pickup means that has a plurality of pixels, and for determining positional information of defective pixels based on the pixel signal. There is also provided a block-forming means for judging whether a plurality of the defective pixels are adjacent to each other on the basis of the positional information of the defective pixels, and for encoding the adjacent defective pixels which are continuously located in one direction. Also, according to Claim 1, the block-forming means defines a block containing the adjacent defective pixels and peripheral, non-defective pixels for use in correcting the defective pixels, in such manner that the blocks formed in this way vary from one another in size or shape or both depending on the number of the adjacent defective pixels in the block and the location of those defective pixels relative to one another. A storage means stores the run-length codes, while a correction means for correcting the defective pixels uses peripheral pixels of the defective pixels.

In a particularly important aspect, Claim 1 recites a correction means that integrates the run-length codes into region information of the defective pixels which are adjacent to each other, and forms a block that contains those defective pixels and peripheral pixels thereof for use in correction of the defective pixels. As illustrated by way of example in Fig. 6, the blocks are of different sizes and shapes depending on the number of defective pixels contained therein, and on the relative location of the defective pixels to each other in the block.

A further illustration of this may be seen by referring to the specification at page 11, line 17, through page 12, line 7, and page 13, lines 17-24. The block, as illustrated in Fig. 8, contains defective pixels as well as pixels necessary for correction. This is advantageous in that it enables faster correction by reducing the time required for otherwise calculating this included data. Specifically, with reference to Figs. 2 and 9, since correction is accomplished by obtaining an average of the pixels surrounding the defective pixel, encoding within the block the positional information of the peripheral pixels available for correction reduces the time for calculation by control unit 8, thereby achieving faster correction.

Fossum, on the other hand, relates to an operation for compensating defective signals in an image-sensing device. Even if that patent discusses encoding the locations of either single dead pixels or continuous groups of bad pixels in a preferred indicium of the form (R, C, T), there is no disclosure of encoding positional information on bad pixels and forming adjacent defective pixels into a block that also contains peripheral pixels available for correction, much less the formation of such blocks whose size and shape vary according to the number and relative locations of the defective pixel9s) therein.

Instead, Fossum describes encoding shapes of bad pixel areas with T as an indication of area type. Column 3, lines 10-19. However, the reference is altogether silent as to positional information on the pixels for correction, and thus, does not obviate the need for further calculation. Accordingly, Fossum fails to teach or suggest the block-forming means recited in Claim 1.

Moreover, Ianni fails to remedy the deficiencies of Fossum as prior art against Claim 1. Unlike the apparatus of Claim 1, Ianni does not even relate to correcting defective pixels, but rather to a data acquisition circuit for merely locating failure signals. As applied against the claims, Ianni only discusses run-length encoding, which, as conceded by the Examiner, is not taught by Fossum. Yet, regardless of its discussion of run-length encoding, nothing has been found in Ianni that is believed to suggest encoding defective pixels within a block together with the peripheral pixels for their correction. As such, it appears that a combination of Fossum and Ianni would, at best, result in an image-sensing device that encodes the location of dead pixels by indicia in the form (R, C, T), using run-length encoding. Therefore, Claim 1 cannot be obvious in view of a combination of Fossum and Ianni, even assuming for argument's sake the existence of some motivation to combine these patents.

Accordingly, Applicant respectfully submits that Claim 1 is patentable over the cited art, and requests withdrawal of the rejection under 35 U.S.C. § 103(a). Independent Claims 35 and 37, directed to a method and storage medium corresponding to the apparatus of Claim 1, respectively, are believed to be patentable for at least the reasons discussed above.

The other rejected claims in this application depend from one or another of the independent Claims 1, 35 and 37 discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. In any event, however, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and the allowance of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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